

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2023
(Fourth Semester)

Branch – CHEMISTRY

DISCIPLINE SPECIFIC ELECTIVE – II: ENVIRONMENTAL CHEMISTRY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 The environment is divided into ----- segments.
(i) 4 (ii) 2
(iii) 3 (iv) 5
- 2 The percentage of Oxygen in the environment is ____%.
(i) 87 (ii) 12
(iii) 78 (iv) 21
- 3 Eutrophication is
(i) algal death (ii) microbial death
(iii) increase in plant and algal growth (iv) decrease in plant and algal growth
- 4 Clarks method uses ----- for water softening.
(i) Calcium hydroxide (ii) sodium carbonate
(iii) ammonium hydroxide (iv) potassium carbonate
- 5 Gammaxane is a
(i) insecticide (ii) fungicide
(iii) herbicide (iv) germicide

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Explain the classification of pollutants with specific examples.
OR
b Illustrate the types of pollution caused in the ecosystem.
- 7 a Give the composition of air. What are green house gases?
OR
b Illustrate the sources and ill effects of Smog. What is London Smog?
- 8 a Explain the term Eutrophication and its effect in environmental pollution.
OR
b Explain COD and BOD.
- 9 a Explain lime soda process and ion exchange process for water softening.
OR
b What is sludge disposal? Explain the need for sludge disposal.
- 10 a Explain the types of radioactive waste that cause soil pollution.
OR
b Illustrate the ill effects of industrial pollutants.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Discuss the carbon and nitrogen cycle with loop diagrams.
OR
b Discuss in detail the environmental educational Programmes and the acts available for environmental protection.
- 12 a Discuss in detail the sources, ill effects and causes for Acid rain. Explain the methods for protection against acid rain.
OR
b What is Ozone layer? Discuss in detail its significance and ill effects caused due to its depletion.
- 13 a Discuss in detail about thermal pollution highlighting the sources, types and its control.
OR
b Discuss in detail about the classification of water pollutants.
- 14 a Discuss the various methods for Sewage treatment available for waste water.
OR
b Discuss in detail the chemical methods of sterilization of water.
- 15 a Discuss in detail the types of pesticides and its effects on the environment.
OR
b Discuss in detail on solid waste sources, effects and its disposal.

Z-Z-Z

END